

attenuated tentacles are seen protruding from the mouth of one. Enlarged under a lens.

- Fig. 2.* Tentacle of *Leucodore*, magnified. The organ is in the somewhat contracted condition in which it usually appears when the animal is placed between glasses: *a*, ciliated groove on the inner surface; *b*, cavity of tentacle; *c*, blood-vessel.
- Fig. 3.* Ciliated parasite attached to a fragment of the tentacle, *a*. $\times 700$ diams.

PLATE XX.

- Fig. 1.* *Dodecaceria concharum*, CErst., from a tangle-root, St. Andrews. Enlarged under a lens.
- Fig. 2.* Hook of the same species. $\times 350$ diams.
- Fig. 3.* Extremities of two of the latter: *a*, of the same specimen; *b*, of a developing or somewhat imperfect specimen. $\times 700$ diams.
- Fig. 4.* Bristles from a dried specimen in limestone from Torquay, sent by Dr. Bowerbank. $\times 350$ diams.
- Fig. 5.* Posterior hook of a small *Sabella saxicava*, from a dried specimen in a *Balanus* sent by Dr. Bowerbank. $\times 700$ diams.
- Fig. 6.* Thoracic hook of *S. saxicava*. $\times 350$ diams.
- Fig. 7.* Minute spear-shaped bristles accompanying the latter. $\times 700$ diams.
- Fig. 8.* Bristles of the same species: *a* & *b*, two of the forms met with in the thoracic region, the latter being viewed laterally; *c*, posterior bristle from the dried specimen referred to under fig. 5. $\times 350$ diams.

XXXIV.—On the Structure of the Shells of *Brachiopoda*.

To the Editors of the *Annals and Magazine of Natural History*.

Oban, Sept. 21, 1868.

GENTLEMEN,

On my return from the mission of scientific research into the zoology of the deep sea, with the charge of which I have had the honour to be entrusted by the Admiralty, at the instance of the Council of the Royal Society (and the very remarkable results of which will be made public at the earliest possible period), I find the note of Prof. King contained in your last Number, on which I have only to remark that the admission he has cited of the fallacy of his original imputation upon the accuracy of my researches into the structure of the shells of *Brachiopoda* is limited to the single case of the recent *Rhynchonella psittacea*, which did not enter into his original charge, because he had not then examined it. That charge was founded upon his superficial examination of fossil *Rhynchonellida* and *Spiriferida*; and neither then nor since has Prof. King made the slightest retraction of it. By declining to reply to my last three questions, he leaves the matter exactly where it was before; so that it must be presumed that

he still holds to his original assertion as to the existence of perforations in these shells.

When Prof. King shall have shown the least ground for the belief that shell-tissue of the most peculiar and characteristic kind can be formed during the process of fossilization, so as to fill vacuities that existed in the recent shell (which is just as if, in the silicification of a piece of wood previously perforated by large holes, these holes should be filled up by true woody tissue), his assumption that the whole of Mr. Davidson's type specimen of *Spirifer cuspidatus* and that the imperforate spaces in the shells of *Syringothyris* were originally perforated may deserve consideration. Until then, I venture to think that the imperforateness of the former type, and the patchiness of the perforations in the latter, are established by Prof. King's confessed inability to set aside the facts stated by me on these points, as the direct results of careful and experienced observation.

Trusting that this is the last occasion on which I shall feel it necessary to address you on this subject,

I remain, Gentlemen,

Your obedient Servant,

WILLIAM B. CARPENTER.

XXXV.—*Description of a new Species of Thylacine* (*Thylacinus breviceps*). By GERARD KREFFT, Curator and Secretary of the Australian Museum, Sydney.

[Plate XVII.]

SKULL shorter ($6\frac{5}{8}$ inch.) than that of *T. cynocephalus* ($7\frac{1}{2}$ inch.); the palatal openings much reduced in size; occipital foramen larger than in the well-known species. The anterior part of the skull is not much compressed; and the sharp nick so prominent in all skulls of *T. cynocephalus*, between the second and third premolars, is wanting in the present species. The greatest difference exists in the teeth, which in the new species are very large, the most prominent being the second and third molars in both jaws. The canines are thicker, and form a shorter curve; the outer incisor of the upper series is also very much larger than the corresponding tooth in *T. cynocephalus*.

I enclose three photographs of the skulls of both animals* in different positions, both very perfect, and that of *T. cynocephalus* larger than that of the new species. The last molar in *T. breviceps* has been lost from both specimens (in possession of the Trustees of this Museum); but the sockets indicate

* We have given in the Plate the figures of the new species only.—ED.